US009636769B2

(12) **United States Patent**
Goehler et al.

(10) **Patent No.: US 9,636,769 B2**
(45) **Date of Patent: May 2, 2017**

(54) **IRRADIATION IN GENERATIVE FABRICATION**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 187 days.

(21) Appl. No.: **14/567,851**

(22) Filed: **Dec. 11, 2014**

(65) **Prior Publication Data**

US 2015/0165545 A1 Jun. 18, 2015

(51) **Int. Cl.**
B23K 26/342 (2014.01)
C22B 9/22 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC ***B23K 15/0006*** (2013.01); ***B22F 3/1055*** (2013.01); ***B23K 15/004*** (2013.01); ***B23K 15/0013*** (2013.01); ***B23K 15/0086*** (2013.01); ***B23K 26/02*** (2013.01); ***B23K 26/342*** (2015.10); ***C30B 13/24*** (2013.01); ***C30B 29/52*** (2013.01); *B22F 5/009* (2013.01); *B22F 2003/1056* (2013.01); *B22F 2003/1057* (2013.01); *B33Y 10/00* (2014.12); *B33Y 80/00* (2014.12);
(Continued)

(58) **Field of Classification Search**
CPC B23K 15/0006; B23K 15/0086; B23K 15/0013; B23K 15/004; B23K 26/02; B23K 26/34; B23K 26/345; B23K 26/342; C22B 9/22; C22B 9/223; C22B 9/228
USPC 219/121.13–121.17, 121.35, 219/121.63–121.66, 121.85; 29/889–889.722
See application file for complete search history.

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(57) **ABSTRACT**

The present invention relates to a method for the generative production of components, particularly of single-crystalline or directionally-solidified components, particularly for the production of components for turbomachines, in which the component is constructed in layers on a substrate or a previously produced part of the component (**3**), wherein a construction in layers takes place by melting of powder material in layers with a high-energy beam (**14**) and solidification of the powder melt (**16**) takes place, wherein the high-energy beam has a beam cross section (**19**) in the area of its impingement on the powder material that is altered in comparison to a circular or other symmetrical cross section and/or the beam energy is distributed non-uniformly, in particular asymmetrically or eccentrically, over the beam section.

13 Claims, 2 Drawing Sheets